

NOTICE: Judgment may be based on indirect test and technical literature. The OSHA Hazard Communication Standard only requires SDS's and special labeling for materials defined as "HAZARDOUS"; see 29 CFR 1910.1200 (c). This document may be about a product which is NOT hazardous but is provided as information for our customers. See references for information.

SECTION 1. IDENTIFICATION

Product Identifier: LSR	Product Identification # (PIF): 01402
Product Use: Lime Scale Remover	Emergency Telephone #: 1-800-255-3924 ChemTel
Manufactured by: Kor-Chem, Inc.	General Information #: 404-344-9580
5800 Bucknell Drive	Date Prepared: January 22, 2014
Atlanta, GA 30336	Date Revised: April 29, 2016

SECTION 2. HAZARD(S) IDENTIFICATION

GHS Hazard Codification



Signal Word: DANGER

Hazard Statement	Category	Code	Hazard Class
May be corrosive to metals	1	H290	Corrosive to Metals
May be harmful if swallowed and enters airways	2	H305	Aspiration Hazard
Causes severe burns and eye damage	1B	H314	Skin Corrosion
Causes serious eye damage	1	H318	Eye Damage
May cause respiratory irritation	3	H335	STOT: SE, Respiratory Tract Irritation
Toxic to aquatic life	2	H401	Hazardous to the Aquatic Environment, Acute Hazard

Precautionary Measures:

Category	Code	Statement
Prevention	P234 P260 P264 P271 P273 P280	Keep only in original container. Do not breathe fumes/mists/ vapors/sprays. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	P301 P330 P331 P303+P361+P353 P363 P304+P340 P310 P321 P305+P351+P338 P310 P390	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Specific treatments: See section 4 First Aid Measures. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Absorb spillage to prevent material damage.
Storage	P403+P233 P404 P405	Store in a well-ventilated place. Keep container tightly closed. Store in a closed container. Store locked up.
Disposal	P501	Dispose of contents/container in compliance with all Federal, State/Provincial and local laws and regulations.

Description of any hazards not otherwise classified: Repeated or prolonged contact causes skin defatting (dermatitis). Inhalation of mists/vapors/sprays is corrosive to the respiratory tract.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	Common Name	CAS #	Concentration Range %
Phosphoric acid	None known	7664-38-2	21 – 25
Hydroxyacetic acid	Glycolic acid	79-14-1	3 – 7

SECTION 4. FIRST AID MEASURES

Eyes: Flush well with water for at least 15 minutes, holding eyelids open. Remove any contact lenses and continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Skin: Remove immediately all contaminated clothing. Rinse skin with water/shower. Wash with soap and water. Wash contaminated clothing before reuse. If irritation persists, seek medical attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. If breathing is difficult, have a trained person administer oxygen. If respiration stops, have a trained

person administer artificial respiration by way of pocket mask equipped with one-way valve or other proper respiratory device – Do NOT use mouth-to-mouth method if victim inhaled material. Call a physician.

Ingestion: Call a physician immediately! DO NOT INDUCE VOMITING. Rinse mouth. Call a physician immediately. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

SECTION 5. FIRE-FIGHTING MEASURES

Flammability: Not flammable

Flash Point: Not flammable

Extinguishing Media: Use media appropriate for surrounding fire. Use water spray to keep fire-exposed containers cool.

Specific hazards arising from chemical: Containers can build up pressure if exposed to heat and/or fire.

Hazardous combustion products: Oxides of carbon and phosphorus.

Firefighting protective equipment: Wear a self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

Sensitivity to static discharge: This product is not sensitive to static discharge.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment (Section 8). Do not breathe fumes/mists/ vapors/sprays. Eliminate all ignition sources. Ventilate area. Wash thoroughly after handling.

For Small Spills: Avoid release to the environment. Avoid dispersal of material and runoff into soil, waterways, drains and sewers. Neutralize with weak basic material (soda ash), then absorb spill with vermiculite or other inert material, and then place in a container for chemical waste. Litmus paper may be used to confirm neutralization. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Wash walking surfaces with water. Dispose of contaminated absorbent material in accordance with local, state and federal regulations.

For Large Spills: Large spills cannot occur due to packaging.

SECTION 7. HANDLING AND STORAGE

Handling: Wear personal protection equipment (Section 8). Use only outdoors or in a well-ventilated area. Do not breathe fumes/mists/ vapors/sprays. Do not premix with other chemicals. Avoid release to the environment. Empty containers may contain residue and can be dangerous. Do not eat, drink or smoke in work areas. Wash thoroughly after handling.

Storage: Keep away from heat, flame, or sunlight. Keep from freezing. Keep container tightly closed when not in use. Store locked up. Store in a well-ventilated place. Protect from physical damage. Store away from strong bases, oxidizing agents and powdered metals.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredient	CAS #	OSHA/PEL	ACGIH/TLV	STEL
Phosphoric acid	7664-38-2	1mg/m ³	1mg/m ³	Not established
Hydroxyacetic acid	79-14-1	Not established	Not established	Not established

Engineering Controls: Provide adequate ventilation. Observe occupational exposure limits and keep the risk of exposure to a minimum.

Personal protective equipment:

Eye: Safety glasses with side shields or splash proof goggles and face shield.

Skin: Chemical resistant (impervious) gloves. Normal materials handling clothing and apron.

Respirator: Use NIOSH approved protection with acid vapor cartridge if PEL is exceeded or if sprays/mists are generated.

Other: Use in a well ventilated area. Do not eat, drink or smoke while handling. Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Red to purple, clear liquid	Upper/Lower flammability limits	Not determined
Odor	None	Vapor pressure	Not determined
Odor threshold	Not determined	Vapor density (Air = 1)	<1
pH	0 - 2	Specific gravity (water = 1.0)	1.170 g/ml
Melting point	Not determined	Solubility	Complete in water
Freezing point	Not determined	Partition coefficient (n-octanol/water)	Not determined
Boiling point	Not determined	Auto-ignition temperature	Not determined
Flash point	Not flammable	Decomposition temperature	Not determined
Evaporation rate (n-butyl acetate=1)	<1	Viscosity	Not determined
Flammability	Not flammable	VOC by weight	0%

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions.

Chemical stability: Stable under normal, ambient temperature and conditions.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Heat, flame and sparks. Keep from freezing. Do not mix with other chemicals

Incompatible materials: Avoid strong bases, oxidizing agents and powdered metals.

Hazardous combustion products: Oxides of carbon and phosphorus.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicity:

Oral (LD50 Rat): Not determined

Dermal (LD50 Rabbit): Not determined

Inhalation (LC50 Rat): Not determined

Skin corrosion/irritation: Corrosive to skin. Symptoms may include burns, ulceration and scarring. Prolonged/repeated skin exposures can result in dermatitis.

Serious eye damage/irritation: Corrosive to eyes. Symptoms may include severe irritation, disintegration, scarring and clouding.

Respiratory or skin sensitization: Inhaling mists/sprays of material is corrosive to respiratory tract and may cause pulmonary edema (shortness of breath and tightness of chest).

Germ cell mutagenicity: No data available

Carcinogenicity: NTP/IARC/OSHA Carcinogen: No

Reproductive toxicity: Not available

STOT-single exposure: May cause respiratory irritation.

STOT-repeated exposure: Not classified

Aspiration hazard: Lung aspiration may result in chemical pneumonitis, pulmonary edema, damage to lung tissue, and in extreme cases death.

Ingestion: Corrosive to the mouth, throat and gastrointestinal tract. Aspiration into the lungs may result in damage or death. Corrosive to digestive tract. May cause severe pain, burning, vomiting and diarrhea. Lung aspiration may result in chemical pneumonitis, pulmonary edema, damage to lung tissue, and in extreme cases death. Fatality or kidney damage may occur from gross overexposure.

Likely routes of exposure: Eyes, skin

Interactive effects: Not available

SECTION 12. ECOLOGICAL INFORMATION

Toxicity:

96h LC-50 (fish): Not determined
 96h EC-50 (invertebrates): Not determined
 48h LC-50 (algae): Not determined

Persistence and degradability: Not determined

Bioaccumulation: Not determined

Mobility in soil: Mobile in soil. This product is soluble in water and may spread in water systems.

Other adverse effects: Toxic to aquatic life – avoid release to the environment. This product can raise the pH of an aquatic environment, and thus be toxic to fish and aquatic plants. As with all chemicals, work practices should be aimed at eliminating environmental releases.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: Do not dump into sewers, on the ground or into any waterways. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Toxic to aquatic life – avoid release to the environment.

Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied. Do not cut, drill, grind or weld on or near the container.

RCRA: A waste containing this product may have the RCRA hazardous waste no. D002 Corrosive (40 CFR 261.22).

SECTION 14. TRANSPORT INFORMATION

United States DOT:

UN/ID No.: UN1760
 Proper Shipping Name: Corrosive Liquids, n.o.s., (Phosphoric acid, Hydroxyacetic acid)
 Hazard Class: 8
 Packing Group: III
 49 CFR §173.154 (b) (2) (Exemption): This product can ship as "Limited Quantity" in inner packaging not over 1.3 gallons (5.0 Liter). (Non Hazardous)

IATA and IMDG:

UN/ID No.: UN1760
 Proper Shipping Name: Corrosive Liquids, n.o.s., (Phosphoric acid, Hydroxyacetic acid)
 Hazard Class: 8
 Packing Group: III
 Marine Pollutant (IMDG Code): Not listed (49 CFR 172.101).
 Toxic to aquatic life (acute)
 Transportation in bulk (IMDG - Annex II of MARPOL 73/78 and IBC Code): Not offered in bulk for transport overseas.

SECTION 15. REGULATORY INFORMATION

TSCA: All components of this product are on the TSCA inventory or are exempt from TSCA inventory requirements under 40 CFR 720.30.

SARA Section 302: The components of this product are either not regulated or regulated, but present in negligible concentrations.

SARA TITLE III Section 311/312:

Immediate (Acute) Health	Yes	Fire Hazard	No
Delayed (Chronic) Health	No	Reactive Hazard	No

SARA Title 313: This material does not contain any chemical components with known CAS numbers that exceed the De Minimis reporting levels (40 CFR 372).

CERCLA: Phosphoric acid CAS# 7664-38-2 has a reportable quantity of 5,000 lbs. at 100% concentration, however, this product is not considered a Hazardous Substance since the quantity does not equal or exceed the RQ in one package (49 CFR 171.8, definition of "Hazardous Substance").

United States Right-To-Know: – Phosphoric Acid CAS# - Massachusetts, Minnesota, Rhode Island, New Jersey & Pennsylvania.

Proposition 65: This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

RCRA: A waste containing this product may have the RCRA hazardous waste no. D002 Corrosive (40 CFR 261.22).

SECTION 16.

OTHER INFORMATION

Date Prepared: April 29, 2016 – SDS updated to meet revision #5 GHS requirements.

Hazard Ratings (HMIS): Health 3, Flammability 0, Reactivity 0 (Scale 0 – 4). Personal Protection Rating to be supplied by user based on use conditions.

Carefully read all instructions on label before handling this product.

Keep out of reach of children.

“FOR INDUSTRIAL USE ONLY”

Abbreviation	Full Name/Explanation
ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CNS	Central Nervous System
CFR	Code of Federal Regulations
DOT	Department of Transportation
EC	Effective Concentration
HMIS	Hazardous Material Information System
LC	Lethal Concentration
LD	Lethal Dose
NA	Not Applicable
ND	Not Determined
NE	Not Established
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation Recovery Act
SARA	Superfund Amendments and Reauthorization Act
STEL	Short-Term Exposure Limit
STOT	Specific Target Organ Toxicity
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
VOC	Volatile Organic Compounds

The information contained herein is based on data available to us and is believed to be correct. We make no warranty, however, expressed or implied regarding the accuracy of these data or the results obtained from the use thereof.

Regulatory Standards: DOT TITLE 49, Code of Federal Regulations 172.101: Parts 100 to 177, Revised 10/1/92.

SUPER FUND AMENDMENTS REAUTHORIZATION ACT OF 1986, TITLE III TOXIC SUBSTANCE CONTROL ACT LIST (TSCA)- INGREDIENTS LISTED, REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES NATIONAL TOXICOLOGICAL PROGRAM (NTP) REPORT OF CARCINOGENS INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) MONOGRAPHS, OCCUPATIONAL SAFETY & HEALTH REGULATIONS. CODE OF FED. REGS. FOOD & DRUG, 21 PARTS 170 to 199, Revised 4/1/91, 173.310.